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Simulation of Stock Market

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By

Edwin Lui

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Abstract

Using tools and information available on the internet, a five-week stock simulation was conducted to investigate the effects of different trading strategies on investments and profits. The experience from this project will be helpful for the student to become a better investor in the future.

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Abstract

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1. Introduction

1.1 Objectives

The two main objectives of this project are: (i) to gain a deeper understanding of the history of stock markets, what it is and how it works; (ii) to understand the different ways of investing in stock markets and the advantages and disadvantages of each investment strategy as well as to gain experience in simulating real life investment in stocks using different techniques. Because the main objective of this project is to do with the background on stock markets and different investment strategies, I will not focus on stock market indexes and how they work. Instead, I will go into depth for each strategy and explain in turn each of its risks and advantages. However, while this project will not discuss in depth stock market indexes, one must keep in mind that they play an immensely important part in influencing decisions concerning stock market investments. They are gathered by news or financial services firms and act as a benchmark that investors in the public can have an idea of the stock market as a whole. Again, as indexes and what it encompasses is quite vast and this project aims to mainly test out different investment strategies, we will only be focusing on other areas of the stock market.

In this project, I will simulate an investment in stocks over a 5 week period, starting with a budget of 100,000 US dollars. Over this period of time, I will utilize different strategies and theories, and examine and analyze the outcome of each. I will be adopting a method of applying all strategies to each and every one of the stocks chosen and to analyze which is the most effective. However, there will be

strategies which cannot be applied to certain kinds of stocks, therefore, for those I will only apply those which are suitable. For example, the penny stock trading- which can only be applied to stocks that are not of major exchanges or of low-price.

1.2 History of Stock Market

Stock markets provide a forum where company stocks and derivatives of company stock can be traded i.e. securities traded at an agreed price listed on these stock exchanges. Stock markets as a whole are combinations of corporations or mutual organisations (stock exchanges) which specialize in the buying and selling of securities.

One of the first and biggest official stock exchange in the world is the New York Stock Exchange (NYSE). It was founded in 1792 in Manhattan's Wall Street area. To date, the second biggest stock exchange in terms of company listings is the Bombay Stock Exchange (BSE), and following that NASDAQ, more of which will be described later [2]. Together, the NYSE, NASDAQ, Amex and other regional exchanges like the 'pink sheets' make up the stock market in the U.S.[12].

The objective of the NYSE had been to serve as a front for the government to sell bonds that would lessen the burden of the Revolutionary War as well as to make available a place where newly developing corporations could trade their stocks. In its most primitive stage, the market operated by 'bidders' calling their bids for each corporation one by one. Eventually, as the NYSE grew, the 'calling' method became less efficient. By 1871, a new marketplace was established so

that the trading for all companies could occur simultaneously, setting the basis for the present methods in which market stocks are traded to this day. Currently, the electronic system used by the NYSE is called the Hybrid Market where customers now send orders for immediate electronic execution or route orders to the floor for trade in the auction market. More than 50% of all order flow is now delivered to the floor electronically [11].

In order to trade stocks directly in the NYSE, one must be an owner of a 'seat' of which there are currently 1366 in total. Originally, in the 1800's, the number of seats was 533 but from then onwards, the number of seats has increased until 1953 where it has been 1366 seats ever since. These seats must be bought and is valid for one-year. Their prices vary according to economic expansions or recessions. In 1929 during the period of great economic inflation, the most expensive seat ever to be sold was \$625, 000, the equivalent of over six million dollars today. Seats today may sell for as high as \$4 million (late 1990s) to \$1 million in 2001.

Another notable market is the NASDAQ- the National Association of Securities Dealers Automated Quotation System, the largest electronic screen-based equity securities trading market in the United States, founded in 1971 with more than 3,200 companies to date and has the most trading volume per day than any other stock exchange in the world. In 1998, the original NASDAQ merged with American Stock Exchange and formed the NASDAQ Stock Market Inc. The NASDAQ currently has around 3,200 listings, of which 335 are non-US companies [10].

One of the distinct features of NASDAQ is that it has a SOES- a small orders execution system. This is because from time to time, the stock market may be quite chaotic and so, this system ensures even 'small orders' can still be processed automatically [2]. This system was first introduced after 1987 when the market crashed and many small orders were forgotten as many telephone exchanges were left unanswered due to the chaotic market condition.

Finally, the American Stock Exchange acquired by NYSE Euronext in January 2008 also makes up a part of the stock market in the United States. Amex was first known as the New York Curb Exchange as it first started outdoors on the 'curbs' of New York City. Although the Amex is considered one of the three major stock exchanges in the US, the companies listed on it are generally smaller compared to the NYSE and NASDAQ and indeed, Amex has more lenient listing policies for companies compared to the other two major stock exchanges [12].

Other major exchanges in the world are for example the Hong Kong Stock Exchange, Tokyo Stock Exchange, Frankfurt Stock Exchange, Bombay Stock Exchange and the London Stock exchange.

1.3 Define Stock markets

Stock markets exist for two main reasons; firstly, it exists so that there can be a market place for sellers and speculative buyers to trade stocks. Secondly, it also serves a purpose of reporting the performance of each listed company for the public to see- arguable the most important aspect of speculative buying of stocks.

A corporation's stock can be defined as a collection of shares which are held by stockholders, so that in effect, each stockholder owns a part of the company. By enabling the company's stocks to be bought by speculative stockholders, it allows the company to grow and expand from the money acquired by stock sharers. Initially, a company borrows funds from a securities market so that they may sell their stocks to the public in the primary market, following that, those shares are traded on the secondary market, i.e. the 'stock market'. In other words, stock markets are the public or private markets on which companies' capital are traded at a price dependent on the value of the company. Bonds can also be traded on the stock market- A bond is a debt certificate issued by the government to say that it will be paid back at a later date.

1.4 How the Stock Market works

Once a company's stocks are available for trading on the market, they are bought according to the speculated value of the market, determined by several factors.

Stocks may only be bought by either small individual stock investors or large hedge fund traders through stockbrokers who act as the 'middle man' between investors in the public who wish to buy a share of the company after charging a brokers fee. With the invention and advancement of the World Wide Web, this has proved to be one of the most efficient and hassle-free ways in which stocks

can be bought and sold. Buyers may simply wish to go onto the stock brokerage firm's website and buy a share in 'real time'.

The risks involved with buying stocks applies to everyone from individuals to large companies or hedge fund investments, as investing in stocks is in some ways, much like gambling. The pay-offs may be less than what was put in and an element of luck may be involved in picking the right stock to invest in. Unforeseeable occurrences may cause the trend of the market to fluctuate. Sometimes, even long standing trends of particular markets may behave unexpectedly and so, investing in stocks has a certain level of risk to it.

Risks may be reduced and gains increased by diversification- the idea of 'not putting all your eggs into the same basket', whereby funds are diversified so that even if the money invested in a particular stock is lost, gains from other stocks may balance out or nullify the losses. Obviously, with diversification, the chance of making enormous gains are less but it has the advantage of reducing the risk of losing a large amount of investment at one go.

2. Investment strategies

Although there are no set 'methods' or rules in which investments in stocks markets are made, there are however clear differences in the strategies one might employ in maximising one's profits in trading stocks. Nowadays, there are an increasing number of people who make a living off studying the trends of the market and advising potential stockholders on the best strategy or stock to invest in. The following chapter will introduce several of the most common strategies in stock trading and discuss the advantages and risks concerning each strategy in turn.

2.1 Penny Stock Trading

Penny stock trading, also known as microcap stock, small caps, and nano caps in the United States are most commonly described as stocks which are less than \$5 per share or sometimes as low as \$1 per share. This type of stock is often perceived rather negatively as trading of penny stocks is considered to be highly risky and the stocks itself are highly volatile. According to the U.S Securities and Exchange Commission (SEC), the official definition of penny stocks is any 'low-priced, speculative security of a very small company, regardless of market capitalization or whether it trades on a securitized exchange (like NYSE or NASDAQ) or those listed outside of these major exchanges i.e. an "over the counter" listing service [2].

These 'over-the-counter' exchanges or 'Pink Sheets' are not strictly exchanges per se as the companies listed with these exchanges do not need to fulfil any

requirements set by the SEC and most are electronically based. For example, the 'Pink Sheets' -named because of the colour of the slips of paper on which the quotes were printed before the electronic system was introduced, are used by companies and brokers to list and display bids and quotes on an electronic system [3]. Because many of the companies who use Pink Sheets do not (and do not need to) meet the requirements of the SEC, no periodic financial reports are filed and so the performance of these companies is often difficult to track and many of the information found may be unreliable or biased. Other similar listings include OTC-BB which also list equity services not listed with the NYSE on an electric quotation system and the TSX- the Toronto Stock Exchange and

Despite the risks involved with investing in penny stocks e.g. fraud, limited liquidity and lack of financial support, trading in penny stocks can yield high rewards due to its low prices and potential for rapid accumulation of profit which could be as high as several hundred percent in just a few days [3]. One of the reasons that prices of penny stocks are so low may be due to the relative newness of the company listed on a public market or due to the company's poor financial performance.

One may wonder why penny stocks are so popular despite the high risks and volatility involved, but it is little wonder when one considers the relative ease penny stocks provide in reaping high rewards with low prices not to mention in such a short period of time [6]. Another advantage of investing in these types of stocks is that it is often speculated that because the price of the stock starts off so low, the price can only go up from there.

However, the disadvantages associated with these stocks often outweigh the advantages. Firstly and most importantly, because of the low prices of these stocks, shareholders would have to invest in large amount of stocks in order to make any substantial gains resulting in very few shareholders per stock. As a result, there will be fewer trades per day compared to other stocks leading to the highly volatile nature of these stocks where stock prices may be prone to extreme changes (either soaring up or crashing down) in a very short amount of time [3].

Another important risk concerning penny stocks is because of the lack of reliable information available on these companies. Often, these companies are not operating successfully and may be on the verge of liquidation and because they are not required by the SEC to provide financial reports, there is often limited trustworthy information either because of fraudsters working for the company who give out false biased information by appearing to be investors with a huge interest and confidence in the company therefore giving others a false sense of confidence in the company's stock [3]. With the widespread use of internet, the spread of these types of fraudulent information otherwise known as 'pump and dump' strategies is especially easy and not uncommon in this day and age. This strategy comes in many forms for example, emails, newsletters, advertisements, 'cold-calls' and even misleading press releases on the performance of companies. More recently, organised gangs originating from Eastern Europe and Asia have even gone as far as to buy up large shares of companies on the verge of liquidation whilst hacking into brokers accounts to buy the rest of the rest of

the shares and at the same time selling up their shares so that the account holders are left holding worthless shares.

Investing in these stocks is especially difficult and risky for inexperienced, first time investors or those unfamiliar with these types of stocks. One way to avoid these scams is to do sufficient amount of research at reliable associations and be confident that the company being invested in is credible and operates reliably and transparently. For even better protection from great losses or scams, one may even consider avoiding these types of unstable stocks completely. Other types of online trading fraud that also apply to penny-stock trading will be discussed further below as it also applies to another type of trading that relies heavily on the technology and efficiency the internet brings- day trading.

For the purposes of this project, any stocks under USD \$5 will be considered a penny stock. With this in mind, I plan to test 2 different penny stocks over a period of 5 weeks. Following the course of the 5 weeks, this strategy will be compared with other strategies which will be introduced below.

2.2 Day Trading

Just as the name of this kind of strategy suggests, day trading is when stocks are bought and sold within a day meaning that it is sold before the stock market closes on the day that the stock is bought. This strategy is in a way similar to penny stock markets in that if invested in wrongly, will result in large losses and is a comparatively more risky way of earning gains from investing in stocks.

Initially, this type of trading was mostly carried out by bank or investment firm employees who had the resources to buy and sell stocks at a moment's notice [7]. However, with changes in legislation, and advances in technology and the internet, this kind of trading has become popular even with those who do not work in the investment field. The gains reaped from day trading are reliant on the speculated rise within the few hours or even minutes that the stock is bought for. As a result, because of this rapid trading, investors must invest a substantial amount of money before any gains are actually worthwhile. Otherwise, any gains may be evened out by any brokers fees needed to buy the stock in the first place or those rises which are not significant enough to cause any gains [3].

In addition, the stocks that day traders are most interested in are those which are not companies of 'substance'. In other words, day trading stocks are often those which are not stable and do not have much significant value but instead are the momentarily 'popular' stocks like the internet technology stocks or 'dot.com' stocks which are incredibly popular during the late 1990's. These stocks can trade at sky high prices but the companies themselves may never even earn as much as their trading prices in the lifetime of the companies existence. These 'popular' stocks are therefore attractive to day-traders looking to earn quick profits in mere seconds but in reality, lack any substantial growth potential in the long run.

Because of this, the risks involved with day trading are quite obvious. A large amount of money is needed in order to obtain worthwhile gains, so at the same time, any misjudgement may cause huge losses too.

There are several reasons why day trading is so popular. Firstly, most day traders borrow money in order to buy stocks and so if they sell the stocks on the same day, it will mean that no overnight marginal interest will be charged. At the same time, by selling the stocks within the same day, any risk in overnight movements in the market which are negative may be avoided [3].

According to the SEC, day trading is not an investment per se but rather, it is a quick and easy way of making money by 'riding the momentum of the stock' and selling again before the stock changes its course and is done so by pure speculation [3]. The SEC strongly cautions individuals on 'investing' by day trading. There are two main risks which come with day trading firstly, because it is a fast-moving market, with the technology available nowadays, almost all transactions are done online through the internet. With this convenience, comes the risk of the many forms of fraud and misinformation not uncommon on the World Wide Web.

As described earlier in the section on penny-stock trading, a common internet fraud is the 'pump and dump' tactic where the media in whichever form may appear to describe the company in perfect light and 'financial health'. These press releases easily found on illegitimate sites on the internet may portray the company to be 'the' company to invest in and the one that will earn investors the greatest amount of profit [3]. This may be done either in newsletters or emails or even imposters for the company posting messages on discussion boards or forums describing their own successful experiences in buying this particular stock. All this 'pumps' up the company's performance image and price but it is just that-

purely an image with possibly reflecting not an element of the company's true financial status and performance on the market. When inexperienced investors rush to invest in this 'hot' new stock, the fraudsters will sell their stocks at the peak of the rush to buy in, leaving the stock's value to plummet. Huge amounts of money can be lost to these unknowing investors by this hyping up of a stock and dumping it at its peak.

Other internet investment scams include unregistered companies and so does not need to file a report to the SEC and so there is no way of keeping track of the real performance and financial status of those unregistered companies [3]. People or companies selling the stocks on the internet may also not be licensed. But most of all, if one plans to invest money into stocks, the best way to prevent scams and frauds is to do enough research before hand and avoid those investments that sound too good to be true.

2.3 Long Term Investment

The biggest difference between all types of short term investments and long term investments is that whilst stocks bought in the short term will be sold sooner or later, long term investments may sometimes never be sold. Thus, it will often be a stock which has a lot of potential and has a stable performance. When looking to invest in a stock in the long term, several factors should be considered.

Most importantly, one must consider how worthwhile that particular stock is to make one willing to invest in it over a long period of time. The company therefore

is likely to be one that is quite large in scale, has in the past performed stably (and is likely to continue to be stable in the foreseeable future), and is generally reliable and sustainable even in the face of difficult economic times [13]. As a result, it can even be said that one must do more research into each potential company to invest in so that its past performances and reputation can be fully understood and trends are able to be speculated before making a long term investment into it.

Secondly, it will often be the case that stocks are bought at a relatively low price, this can ensure greater chances for the stock to rise and therefore earn larger profits. If the stock is overvalued, there would not be much room for it to grow in value, however at the same time if it is a reliable stock, often it will be more expensive compared to smaller stocks or companies [13].

Thirdly, also to do with careful investigation into the company, is whether the company and what it sells or represents is seasonal. If it is seasonal for example, beer stocks like Carlsberg may go up during soccer world cup season or wheat stocks may go down during monsoon or wet weather season in wheat growing countries.

Sometimes, people may even invest in the stock just for gaining the interest received from the company. For example, in Hong Kong, many investors invest in HSBC (Hong Kong & Shanghai Bank) as a source of a stable gain. Usually, the money used to invest in the long term is that which will not be needed or is excess money which can be put away for a long period of time.

One advantage of long term investment is that the company is likely to be stable enough so that the stock market trends does not have to be followed on a day to day basis like in other short term investments mentioned above. It can just be left there to oscillate according to the market trend and intended to make gains in the long term.

Another advantage of investing by this tactic is that less commission charges have to be paid compared to day or penny trading which requires many transactions even within one day.

Generally, this can be said to be a less risky way of investing one's money although one must have the financial ability to put away a certain amount of money for a long period of time and willing to wait out in the face of losing in the short term but making profit in the long run. Some economists have strongly argued for the case that stocks are the best long term investments because on the one hand statistics have shown that stock investment returns exceeds any other returns on any other type of investment, on the other hand, financial models like the CAPM model which predicts that investments are made dependent on two factors, expected yield and risk [13]. So, investments made according to this model take only into consideration the stock yield depending on the market behaviour as a whole [1].

Theoretically speaking, long term investment should be one of the most reliable and stable ways to accumulate almost guaranteed gains on the stock market.

Although it is a slow process, long term investors can be said to be guaranteed gains through their investments.

3. Company Research

Google Inc.

For long term trading, I chose to invest in Google Inc. As mentioned in the introduction to long term investment, this type of strategy produces the best result i.e. maximum gain when the stock invested is a developed and stable company. Google, as everyone knows, is one of the biggest search engines on the world wide web and has a market capitalization of more than US\$23 billion. In 2004, Google's stock price was \$85 per share, and in October 2007, it went up to \$700 for the first time. From this, it can be seen that Google is full of potential to be a good stock investment.

Ford Motor Co.

Ford Motor Company is one of the top automaker in the world. The reason I chose to buy Ford is because I want to see how the auto industry is doing since the oil price is so high nowadays.

Mcdonald's Corp

Mcdonald's is the world's largest chain of fast food restaurants. The main reason I chose to invest in Mcdonald's is due to the high stock price that it has. Also secondly is to gain a better understanding of the world's biggest fast-food restaurant and the trend of its company derivatives.

The Walt Disney Company

The Walt Disney Company is one of the largest media and entertainment corporations in the world. It is the owner of eleven theme parks and several

television networks, which includes ABC and ESPN. The reason I chose to invest in Disney is due to the high stock price, and from looking at Fig 2., we can see Disney was around 35\$ few months ago, therefore I find it has the potential of rising.

AT & T

AT&T is the largest provider of both local and long distance telephone services in United States. I have chose to invest in this stock is firstly because of the high stock price, and secondly due to AT&T is the sole provider for the Apple's Iphone, and since the Iphone is so popular, I'd like to see whether the Iphone has brought up the stock of AT&T.

eBay Inc.

eBay Inc. is an American internet company that manages eBay.com, which is an online auction and shopping website in which people buy and sell goods and services worldwide. The reason I chose to invest in eBay is the high stock price and to see the stock trend of one of the biggest online company.

Exxon Mobil

Exxon Mobil is an American oil and gas corporation, formed by the merger of Exxon and Mobil. Exxon Mobil is the world's largest company by revenue, and currently ranks #1 in world in terms of net income. As all drivers know, the gas price for the past few months has risen by a very high percentage, therefore other than the expensive stock price of Exxon Mobil, the main reason I chose to

invest in Exxon Mobil is to see whether the high gas price nowadays is correlated with Exxon Mobil's stock trend.

Amazon.com Inc.

Amazon.com Inc. is an American electronic commerce company. It was one of the first major companies to sell goods online, and it was one of the major stocks that people invest during the dot-com bubble. The main reason I chose to invest in this stock is mainly due to the "expensiveness", and I'd like to see the development of this once was an iconic stock during the dot-com bubble.

Abercrombie & Fitch

Abercrombie & Fitch is an American lifestyle brand and company that markets youth apparel. I chose to invest in this stock because I was surprised to see such a high stock price for a clothing brand. During my research, I realized that many of the American clothing brands are listed companies, unlike clothing brands in other countries, e.g. Hong Kong, where a very few of them are listed and also their prices are very low compared to American cloth brands.

MoneyGram Intl Inc.

MoneyGram International is a United States-based financial services company. Its main services are money transfer, money orders, and bill payments services. The reason I chose to invest in this stock is simply because I'd like to see how a company of this kind is.

Apple Computer, Inc.

Apple Computer, Inc. is an American multinational corporation with a focus on designing and manufacturing consumer electronics and software products. The reason I chose to invest in this stock is because of one of their product, the iPhone 3G, is coming out, and I'd like to see whether this product will affect the stock price of Apple.

Novell Inc.

Novell is a global software corporation based in the America specializing in enterprise operating systems. A lot of schools and universities use Novell for their network also, even WPI. Therefore, the reason I chose to invest in this stock is just to see the development of this company, also the low stock price it has.

Advanced Micro Devices, Inc.

Advanced Micro Devices is a multinational semiconductor company. They develop all kinds of computer processors and technology related products. It is the second largest global supplier of microprocessors, and the third largest supplier of graphic processing units. The reason I invested in this stock is to gain a sight of the development of this kind of technology based company, and the low stock price it has.

China Precision Steel Inc.

China Precision Steel is a steel company that takes commodity steel and creates a specialty premium steel. Due to family business, I chose to invest in this stock and gain a sight of the development of metal industry.

Royal Energy Inc.

Royal Energy is an independent energy company. It is one of the leading independent producers of oil and natural gas. The main reason I chose to invest in this stock is due to the high gas price nowadays and would like to see if there is a correlation. Also because of the cheap stock price it has.

Washington Mutual Inc.

Washington Mutual is a saving bank holding company. It is one of United States largest saving and loan association. The main reason I chose to invest in this stock is because of the low stock price.

Petrohawk Energy Corp.

Petrohawk is another independent energy company. The reason I chose to invest in this company is the same reason as I chose to invest in Royal Energy, to see if there is a correlation between the high gas price and the energy industry.

Sovereign Bank Corp.

Sovereign Bank is the 19th largest bank in the United States. I invested in this stock because I have opened a bank account there, so I'd like to see the development of the bank.

Target Corp.

Target is an American retailing company, and is the fifth largest retailer by sales revenue in the United States. The main reason I chose to invest in this stock is because of the rather high stock price it has, which was surprising.

Verizon Communications Inc.

Verizon Communications is an American broadband and telecommunication company. The reason I chose to invest in this stock is mainly because of the stock price, and to have a comparison with AT&T.

Diedrich Coffee Inc.

Diedrich Coffee is a coffee company in America. The main reason I invested in this stock is because of the cheap stock price it has.

The Coca Cola Company

The Coca Cola Company is the world's largest beverage company, and is one of the largest corporations in the United States. I decided to invest in this company because of high stock price and the stability of the company.

Yahoo! Inc.

Yahoo! is an online company that provides a variety of internet services. It is the second most visited website in the United States, and the most visited website in the world. It is also one of the few companies that survive from the dot com bubble. That is the reason I chose to invest in this company, to see its development.

Toyota Motor Corp

Toyota is the world's largest automaker. Again, the reason I chose to invest in this stock is due to high gas price nowadays, and I'd like to see whether it affects the auto industry.

Bank Of America Corp

Bank of America is the second largest commercial bank in the United States. The reason I invest in this bank is because I also have a bank account there, so I'd like to see the development of the bank.

Gold Reserve Inc.

Gold Reserve is an emerging mining company. The main reason I chose to invest in this stock is due to the cheap price it has.

4. Results for Simulation

All transactions have added a \$10 commission just to be realistic.

4.1 First week of simulation

Date	Symbol	Action	Number of shares	Buy in price	Sell out price	Cost/ Proceeds	Profit / Loss	Total cash
6/30/2008	GOOG	Buy	100	530.92		53102		46898
	F	Buy	1000	4.71		4720		42178
	MCD	Buy	100	56.21		5631		36547
	MCD	Sell	100		57	5690	+59	42237
7/1/2008	DIS	Buy	1000	30.63		30640		11597
	DIS	Sell	1000		30.97	30960	+320	42557
7/2/2008	T	Buy	1000	33.36		33370		9187
	T	Sell	1000		33.07	33060	-310	42247
7/3/2008	EBAY	Buy	1000	27.23		27240		15007

Table 1. Week 1 simulation

On the first day of the simulation, I have invested in three stocks. The first one is Google Inc. with 100 shares, which I invested it as my Long Term investment. The second one is Ford Motor Company with 1000 shares, which I invested it as a Penny Stock. The third one is Mcdonald's with 100 shares, which I invested it as Day Trading. For the next three days of the weeks, I have traded three more stocks for Day Trading. One is Disney, second one is AT&T, and the third one is Ebay, all with 1000 shares. For Mcdonald's, a profit of \$59 was gain, a profit of \$320 for Disney, a loss of \$310 for AT&T, and a loss \$490 for Ebay.

4.2 Second week of simulation

Date	Symbol	Action	Number of shares	Buy in price	Sell out price	Cost / Proceeds	Profit / Loss	Total cash
7/7/2008	XOM	Buy	400	86.5		34610		7147
	XOM	Sell	400		86.95	34770	160	41917
7/8/2008	AMZN	Buy	400	72		28810		13107
	AMZN	Sell	400		75	29990	1180	43097
7/9/2008	NOVL	Buy	7000	5.8		40610		2487
	NOVL	Sell	7000		5.77	40380	-230	42867
7/10/2008	ANF	Buy	500	55		27510		15357
	ANF	Sell	500		54.03	27005	-505	42362
7/11/2008	F	Sell	1000		5	4830	110	47202
	APPL	Buy	200	171		34210		12992

Table 2. Week 2 simulation

In this week's simulation, on the first four days I have invested one stock each day for day trading strategy. The first day I invested in Exxon Mobil with 400 shares, the second day is Amazon.com Inc with 400 shares, the third day I invested in Novell Inc with 7000 shares, and the fourth day is Abercrombie & Fitch with 500 shares. The fifth day, I have sold the Ford Motor Co. from last week and made a profit of \$110, also I invested in Apple Inc. with 200 shares as day trading. A profit of \$160 was gain from Exxon Mobil, a profit of \$1180 for Amazon, a loss \$230 for Novell, a loss \$505 for Abercrombie & Fitch, and a profit of \$980 for Apple.

4.3 Third week of simulation

Date	Symbol	Action	Number of shares	Buy in price	Sell out price	Cost	Profit / Loss	Total cash
7/14/2008	MGI	Buy	10000	1.16		11610		36572
	AMD	Buy	7000	4.84		33890		2682
	AMD	Sell	7000		4.94	34570	680	37252
7/15/2008	CPSL	Buy	9000	4.1		36910		342
	CPSL	Sell	1000		4.05	36440	-470	36782
7/16/2008	ROYL	Buy	4000	8.3		33210		3572
	ROYL	Sell	4000		7.97	31870	-1340	35442
7/17/2008	WM	Buy	7000	4.56		31930		3512
	WM	Sell	7000		5.5	38490	6560	42002
7/18/2008	HK	Buy	1000	37.9		37910		4092

Table 3. Week 3 simulation

In this week's simulation, on the first day, I have bought 10000 shares of Moneygram for this three weeks penny stock. On the same day I invested in 7000 shares of AMD and made a profit of \$680. The next four days, I invested in one stock per day: 9000 shares of China Precision Steel and lost \$470, 4000 shares of Royal Energy and lost \$1340, 7000 shares of Washington Mutual and made a profit of \$6560, and 1000 shares of Petrohawk Energy with a profit of \$1980.

4.4 Fourth week of simulation

Date	Symbol	Action	Number of shares	Buy in price	Sell out price	Cost	Profit / Loss	Total cash
7/21/2008	SOV	Buy	5000	8.37		41860		2122
	SOV	Sell	5000		8.1	40490	-1370	42612
7/22/2008	TGT	Buy	600	45.3		27190		15422
	TGT	Sell	600		46.1	27650	460	43072
7/23/2008	VZ	Buy	1000	34.7		34710		8362
	VZ	Sell	1000		36.1	36090	1380	44452
7/24/2008	DDRX	Buy	25000	1.65		41260		3192
	DDRX	Sell	25000		1.75	43740	2480	46932
7/25/2008	KO	Buy	500	52.25		26135		20797

Table 4. Week 4 simulation

This week I have invested one stock per day. First was 5000 shares of Sovereign Bank, with a loss of \$1370. Second was 600 shares of Target, with a profit of \$460. Third was 1000 shares of Verizon, and a profit of \$1380. Fourth was 25000 shares of Diedrich, with a gain of \$2480. The fifth was 500 shares of Coca Cola, and lost \$115.

4.5 Fifth week of simulation

Date	Symbol	Action	Number of shares	Buy in price	Sell out price	Cost	Profit / Loss	Total cash
7/29/2008	YHOO	Buy	1000	20		20010		28587
	YHOO	Sell	1000		20.15	20140	130	48727
7/30/2008	TM	Buy	400	88.4		35370		13357
	TM	Sell	400		89.05	36510	240	48967
7/31/2008	BAC	Buy	1000	32.7		32710		16257
	BAC	Sell	1000		33.7	33690	980	49947
8/1/2008	GOOG	Sell	100	530.92	467.86	53102	-6326	96723
	MGI	Sell	10000	1.16	1.47	11610	3080	111413
	GRZ	Buy	20000	1.42		28410		83003

Table 5. Week 5 simulation

This week was the last week of the simulation. On the first three days I have invested one stock each day for day trading strategy. First was 1000 shares of Yahoo! with a profit of \$130. Second was 400 shares of Toyota, with a gain of \$240. Third was 1000 shares of Bank of America, and a profit of \$980. At last, I have sold 100 shares of Google that I bought on the very first day of the simulation, and lost \$6326. Also I have sold the 10000 shares of Moneygram, and earn a profit of \$3080. On the same day, I also invested in 20000 shares of Gold Reserve and made a profit of \$580.

5. Data Analysis

5.1 Penny Stock

Date	Symbol	Action	Number of shares	Buy in price	Sell out price	Cost	Profit / Loss
6/30/2008	F	Buy	1000	4.71		4720	
7/11/2008	F	Sell	1000		5		+270
7/14/2008	MGI	Buy	10000	1.16		11610	
8/1/2008	MGI	Sell	10000	1.16	1.47	11610	+3080

Table 6. Results for Penny Stocks

Ford Motor Co.

Symbol	Number of Shares	Money Used	Buy in Price	Sell out Price	Gain / Loss
F	1000	4710	4.71	5	+ 270

Table 7. Result for Ford Motor Co.



Fig 1. Ford Motor Co. in the past 3 months

From Table 6 and Fig 1, it can be seen that I have bought 1000 shares of Ford Motor at the price of \$4.71. I have kept it for two weeks and I sold it at \$5. I have made a profit of \$290 excluding the transaction fees. From Fig 1, it shows that there was a sudden rise in the stock price and at one point it went up to \$6. That means if I have kept the stocks for another two weeks, I could have made a profit up to \$1290. From Fig 1, the graph is somewhat noisy, which means there were quite a lot of fluctuations. But the fluctuations were not very big, only with an average of \$0.40 to \$0.50 cents. Therefore, in order to gain a bigger profit with this stock, more shares needs to be consumed. Which at the same time also means a higher risk of losing a lot of money, because the fluctuation is so small, so when it drops, it takes a longer time to return to the price bought at.

MoneyGram International Inc.

Symbol	Number of Shares	Money Used	Buy in Price	Sell out Price	Gain / Loss
MGI	10000	11600	1.16	1.47	+ 3080

Table 8.Results for MoneyGram International Inc.

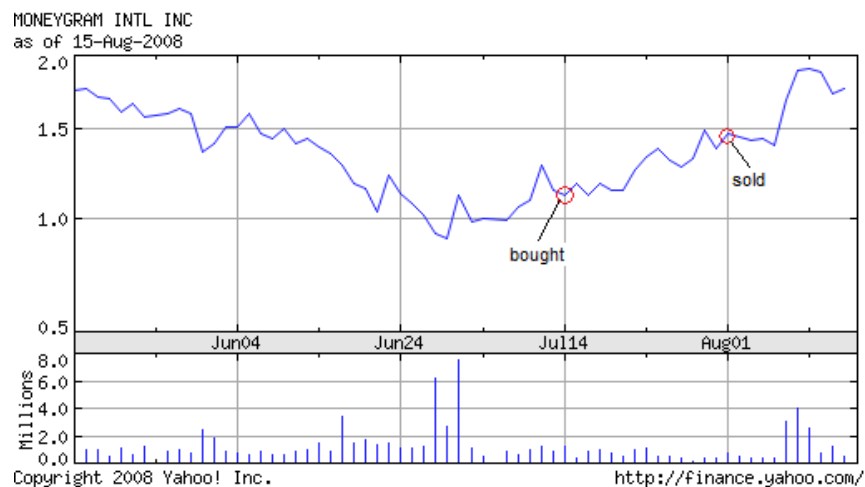


Fig 2. Chart for MoneyGram International Inc. in the past 3 months

For MoneyGram International, I have bought 10000 shares on the first day of the third week at the price \$1.16. I have sold it after three weeks on the last day of the simulation at the price \$1.47. Therefore I have made a profit of \$3080, which is a pretty adequate amount, in terms of such a short time and so little money was used to invest. The main reason this time I have a much bigger profit for this penny stock than the Ford motor that I invested in the first two weeks of the simulation is because instead of 1000 shares, I have bought 10000 shares this time. Which makes even 30 cents of rising still brought me \$3000 profit. If I have applied the same strategy onto the Ford motor, I would have also made a profit of \$3000.

Overall, I find this two Penny Stock trading fairly successful, as both of them I have made profit, and one of them was even in a pretty adequate amount. I find it a good strategy to invest in a penny stock for such amount of time period, around two to three weeks. First, since the price of the stock is so low, so a large amount of shares can be bought. Secondly, since the price is so low, even when it drops, it tends to not drop as much in terms of the price itself. The risk for this method is fairly low, since penny stocks tend to drop in a slower rate according to my result, so even within the two to three weeks time it was dropping, it would not lost too much money. But if the stock was rising during the two to three weeks, and since so many shares can be bought, but the money used is still relatively little, the profit that can be made is relatively high even if the stock price rises for less than a dollar.

5.2 Long Term Trading

Date	Symbol	Action	Number of shares	Buy in price	Sell out price	Cost/ Proc.	Profit / Loss
6/30/2008	GOOG	Buy	100	530.92		53102	
8/1/2008	GOOG	Sell	100	530.92	467.86	46776	-6326

Table 9. Results for Long Term Trading

Google Inc.

Symbol	Number of Shares	Money Used	Buy in Price	Sell out Price	Gain / Loss
GOOG	100	53092	530.92	467.86	-6306

Table 10. Results for Google



Fig 3. Google Inc. in the past 3 months

As can be seen from Fig. 4 and Table 7 and 8, I bought 100 shares of Google Inc. at the price of \$530.92 on the first day of the simulation. Over the first two weeks, the maximum profit made was \$2333 at the price of \$554.25. However, after this maximum gain, the stock went down from there onwards to its lowest point of \$467.86 where I sold it coincidentally at the last day of the simulation.

To wrap up, I wouldn't consider this trading as a failure, because as I mentioned in the introduction, Long Term investment usually last much longer than 5 weeks. As can be seen from Fig 4., after the last day of my simulation, the stock price has started to rise and an upward trend is shown. Therefore, if my simulation was longer, there is a very high possibility that I will make a profit rather than losing.

5.3 Day Trading

Presumably, for Day Trading, one should target less expensive stocks, because there are more fluctuations for those stocks in terms of short term. But just for experimental purpose, I chose to test three types of stock, which can be categorized as "Expensive", "Normal", and "Cheap". They are distinguished by their price: \$0 to \$10 is "Cheap", \$11 to \$40 is "Normal", and everything above \$41 is "Expensive".

5.3.1 Day Trading – Expensive

Date	Symbol	Action	Number of shares	Buy in price	Sell out price	Cost	Profit / Loss
6/30/2008	MCD	Buy	100	56.21		5631	
6/30/2008	MCD	Sell	100		57		59
7/7/2008	XOM	Buy	400	86.5		34610	
7/7/2008	XOM	Sell	400		86.95		160
7/8/2008	AMZN	Buy	400	72		28810	
7/8/2008	AMZN	Sell	400		75		1180
7/10/2008	ANF	Buy	500	55		27510	
7/10/2008	ANF	Sell	500		54.03		-505
7/11/2008	APPL	Buy	200	171		34210	
7/11/2008	APPL	Sell	200		176		980
7/22/2008	TGT	Buy	600	45.3		27190	
7/22/2008	TGT	Sell	600		46.1		460
7/25/2008	KO	Buy	500	52.25		26135	
7/25/2008	KO	Sell	500		52.06		-115
7/30/2008	TM	Buy	400	88.4		35370	
7/30/2008	TM	Sell	400		89.05		240

Table 11. Results for Day Trading (Expensive)

Mcdonald's Corp

Symbol	Number of Shares	Money Used	Buy in Price	Sell out Price	Gain / Loss
MCD	100	5631	56.21	57	+59

Table 12. Results for Mcdonald's Corp.



Fig 4. Mcdonald's Corp. in the past 3 months

Looking at Fig. 4 and Table 12, it can be seen that 100 shares of Mcdonald's Corp. was bought at the price \$56.21 at the beginning of the day, and then it was sold at \$57. A profit of \$59 was therefore made with this stock. The reason I chose to sell the stock at \$57 was because I was not sure whether it would go any higher than this price, as a result, I chose to sell it and make a small profit instead of losing money. Although the highest price that day was \$57.38, and I could have made an extra of \$38, however, selling a stock or keeping it is difficult to time correctly. Since I had only 100 shares, the earning would have been relatively low anyway, as a result, I have learned from this experience to try to buy more shares for day trading in the later stages of the simulation. Also, looking at Fig. 4, if I invest in Mcdonald's as a Long Term investment, I had a

chance of making a profit of \$1000, since it rose from \$56 to \$66 at one point. This shows that Day Trading is probably not the most suitable strategy to use to invest in such expensive stocks.

Exxon Mobil

Symbol	Number of Shares	Money Used	Buy in Price	Sell out Price	Gain / Loss
XOM	400	34610	86.5	86.95	+160

Table 13. Result for Exxon Mobil

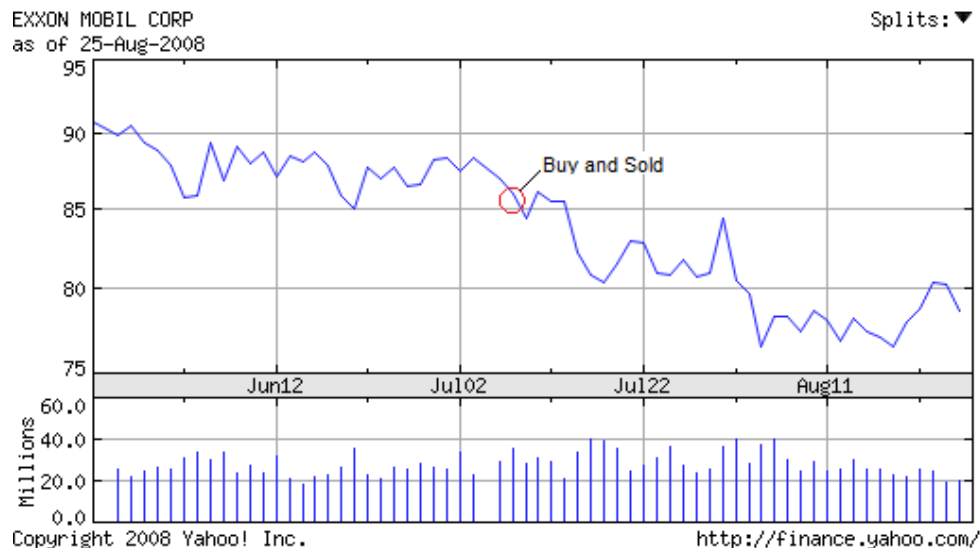


Fig 5. Exxon Mobil in the past 3 months

From Table 10 and Fig 5, it can be seen that I have made a profit of \$160 in that day. I have bought 400 shares at the price \$86.5, and sold it at \$86.95, a gaining of \$0.45 cents. As I declared from the trading experience with Mcdonald's, rather than buying only a 100 shares for day trading, more shares should be bought. Therefore I bought 400 shares this time, and therefore my profit this time is more than four times than last time, even with such an expensive stock. Fortunately, I

only have invest in Exxon Mobil for one day, because looking at Fig 6., the price of Exxon Mobil has been dropping after the day I traded.

As I mentioned in the company research for Exxon Mobil, the gas price has been rising for the past few months, and that was the reason I invested in this stock. Looking at Fig 5, we see a downward trend for the past three months. From this, I can believe that the gas price and the stock trend of Exxon Mobil are somewhat inversely proportional.

Amazon.com Inc.

Symbol	Number of Shares	Money Used	Buy in Price	Sell out Price	Gain / Loss
AMZN	400	28810	72	75	+1180

Table 14. Result for Amazon.com Inc.



Fig 6. Amazon.com Inc. in the past 3 months

Looking at Table 14 and Fig 6, showing that I have bought 400 shares of Amazon.com at the price of \$72, and have sold it at the price \$75. A profit of \$1180 was made during this trade. It was a stroke of luck that such a big profit was made this day. Looking at Fig 6., it can be seen that it was a coincident that the day I traded the stock had a sudden grow, other than the day I invest, the graph shows a generally downward trend during the month that I traded. But if I have kept the stock for a longer time, I had a possibility of making a profit of \$4800, since the stock has once gone up to \$87 during mid August. Therefore, once again, to optimize profit, Day Trading might not be the most suitable strategy for such high price stocks.

Abercrombie & Fitch

Symbol	Number of Shares	Money Used	Buy in Price	Sell out Price	Gain / Loss
ANF	500	27510	55	54.03	-505

Table 15. Result for Abercrombie & Fitch

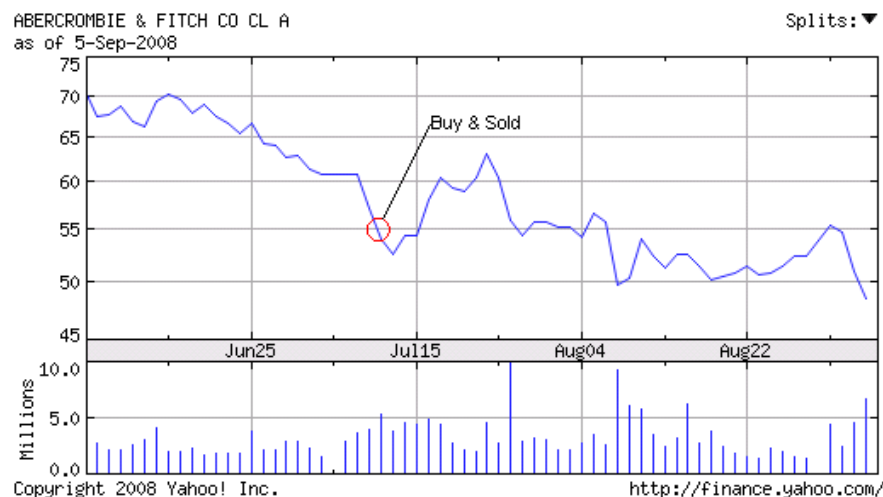


Fig 7. Abercrombie & Fitch in the past 3 months

Looking at Table 15 and Fig 7, it shows that I have bought 500 shares of Abercrombie & Fitch at the price of \$55 at one point of the day, and have sold it at \$54.03. I lost \$505 on this day. As Fig 8 shows, there was not much fluctuation for this stock, it took a long period for it to rise a significant amount. Also because the stock price is so expensive, not a lot of shares can be bought. Therefore, Day Trading is certainly not suitable for this stock, because it takes too long for it to rise in a significant amount, plus even when it rises, but because the stock price is too high, and not too many shares can be bought, the profit will not be too high.

Apple Inc.

Symbol	Number of Shares	Money Used	Buy in Price	Sell out Price	Gain / Loss
AAPL	200	34210	171	176	+980

Table 16. Results for Apple Inc.



Fig 8. Apple Inc. in the past 6 months

From Table 16 and Fig 8, we can see I have bought 200 shares of Apple at the price \$171, and have sold it out when it reached \$177 on that day. A profit of \$980 was made. As I have mentioned in the company research section, the reason I decided to invest in Apple was because the Iphone 3G was out on the July 11th, and I'd like to see whether the Iphone affects the stock price of Apple's. Apparently, the Iphone did affect the stock price, because according to Fig 8, during the few days period when the Iphone came out, there was a sudden rise in the stock price. But anyways, although there was such a big difference, I only made a profit of \$980, which is a fairly small amount comparing to the money I used to buy. This is because the stock price is so expensive, and I could only afford at most 200 shares. Therefore, for such expensive stocks, Day Trading is certainly not the suitable strategy.

Target Corp.

Symbol	Number of Shares	Money Used	Buy in Price	Sell out Price	Gain / Loss
TGT	600	27190	45.3	46.1	+460

Table 17. Results for Target



Fig 9. Target in the past 6 months

I have bought 600 shares of Target at the price \$45.3, and have sold it out at \$46.1, which brought me a profit of \$460. This is by far the “cheapest” “expensive” stock I have invested, and comparing Fig 9 with the previous day trading expensive stocks, the trend of Target is relatively noisy comparing to the rest. But again, due to the stock price is so high, there is a limit on how many shares I can afford, therefore even when it rises a lot, my profit is not too adequate.

Coca Cola Co.

Symbol	Number of Shares	Money Used	Buy in Price	Sell out Price	Gain / Loss
KO	500	26135	52.25	52.06	-115

Table 18. Results for Coca Cola



Fig 10. Coca Cola in the past 6 months

From Table 18, we see that I have bought 500 shares of Coca Cola at the price \$52.25, and sold it at \$52.06, which at the end a loss of \$115. One reason I lost so little for this trading is because the stock is too expensive and I cannot afford too many shares. Also another reason is because I was doing day trading, I was going to sell the stock on the same day no matter what anyways, so I only afford to lose at most one day of the falling difference, which is not too significantly large in one day.

Toyota Motor Corp.

Symbol	Number of Shares	Money Used	Buy in Price	Sell out Price	Gain / Loss
TM	400	35370	88.4	89.05	+240

Table 19. Results for Toyota



Fig 11. Toyota in the past 6 months

Looking at Table 19 and Fig 11, we can see I have made a profit of \$240 from 400 shares of Toyota bought at the price \$88.4, and was sold at \$89.05. This trading was a very risky one, since I have used \$35370 to invest in this stock, and have a return profit of \$240, which is significantly small comparing to the amount I used. Again, because the stock is so expensive, I could only afford at most 400 shares, that is why even if it rises a lot in one day, my profit is still relatively low comparing to the money I used. Therefore, expensive stocks are not suitable for day trading method.

5.3.2. Day Trading – Normal

Date	Symbol	Action	Number of shares	Buy in price	Sell out price	Cost	Profit / Loss
7/1/2008	DIS	Buy	1000	30.63		30640	
7/1/2008	DIS	Sell	1000		30.97		+320
7/2/2008	T	Buy	1000	33.36		33370	
7/2/2008	T	Sell	1000		33.07		-310
7/3/2008	EBAY	Buy	1000	27.23		27240	
7/3/2008	EBAY	Sell	1000		26.76		-490
7/18/2008	HK	Buy	1000	37.9		37910	
7/18/2008	HK	Sell	1000		39.9		1980
7/23/2008	VZ	Buy	1000	34.7		34710	
7/23/2008	VZ	Sell	1000		36.1		1380
7/29/2008	YHOO	Buy	1000	20		20010	
7/29/2008	YHOO	Sell	1000		20.15		130
7/31/2008	BAC	Buy	1000	32.7		32710	
7/31/2008	BAC	Sell	1000		33.7		980

Table 20. Results for Day Trading (Normal)

The Walt Disney Company

Symbol	Number of Shares	Money Used	Buy in Price	Sell out Price	Gain / Loss
DIS	1000	30640	30.63	30.97	+320

Table 21. Results for Walt Disney Company

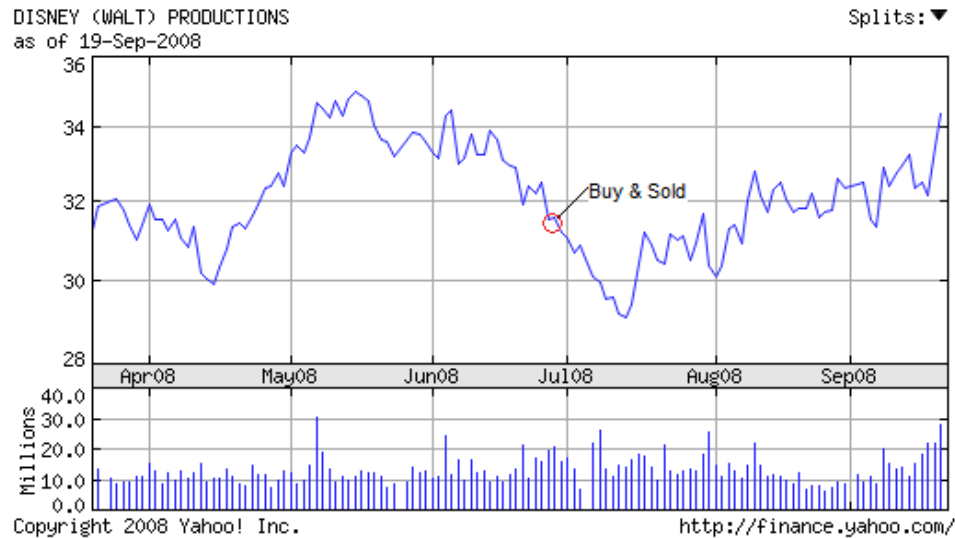


Fig 12. Disney in the past 6 months

Looking at Table 21 and Fig 12, it can be seen that I have made a profit of \$320 this day. Just by analyzing, I was very fortunate to make a profit of \$320, because from looking at Fig 12, it shows that Disney had a declining trend from around June to middle of July, which the day I traded lies on the declining trend too. But because I have bought 1000 shares, and that day suddenly had a slight increase, therefore I was fortunate enough to make a profit. Also, due to the stock price is less expensive, I could afford 1000 shares, which lead me to a profit of \$320 even with such a slight rise of \$0.30 cents.

AT & T

Symbol	Number of Shares	Money Used	Buy in Price	Sell out Price	Gain / Loss
T	1000	33370	33.36	33.07	-310

Table 22. Results for AT&T



Fig 13. AT&T in the past 6 months

Looking at Table 22 and Fig 13, I have lost \$310 in today's trading. I have bought 1000 shares at the price of \$33.36, but looking at the trend on that day, I decided to sell it at \$33.07 with a loss of \$310. The lowest price on that day was \$32.85, therefore if I have kept it for longer, at the end of the day I would lose \$510 instead. From looking at Fig 6 and the result of this day's trading, it shows that this stock is definitely not suitable for day trading, as the fluctuation is so small each day.

eBay Inc.

Symbol	Number of Shares	Money Used	Buy in Price	Sell out Price	Gain / Loss
EBAY	1000	27240	27.23	26.67	-490

Table 23. Results for eBay Inc.



Fig 14. eBay Inc. in the past 6 months

Referring to Table 12 and Fig 7, I have lost \$490 for this day's trading. I have bought 1000 shares at the price of \$27.23, and have sold it when it dropped to \$26.67, resulting in a \$470 loss. From the results of this day's trading and Fig 14., although this stock has a fairly noisy trend, but even if the fluctuation is big, the profit is still relatively small comparing to the amount I used because the price is still fairly expensive. Day trading may not be the most suitable strategy to be executed on this type of moderately high price stocks.

Petrohawk Energy Corp.

Symbol	Number of Shares	Money Used	Buy in Price	Sell out Price	Gain / Loss
HK	1000	37910	37.9	39.9	+1980

Table 24. Results for Petrohawk



Fig 15. Petrohawk in the past 6 months

I have bought 1000 shares of Petrohawk at the price of \$37.9, and have sold it at the price \$39.9, resulting a profit of \$1980 was gained. This is by far the most successful trading with the day trading method. From looking at the trend, it can be seen that the high gas price issue does not affect the development of the company.

Verizon Communications Inc.

Symbol	Number of Shares	Money Used	Buy in Price	Sell out Price	Gain / Loss
VZ	500	17360	34.7	36.1	+680

Table 25. Results for Verizon

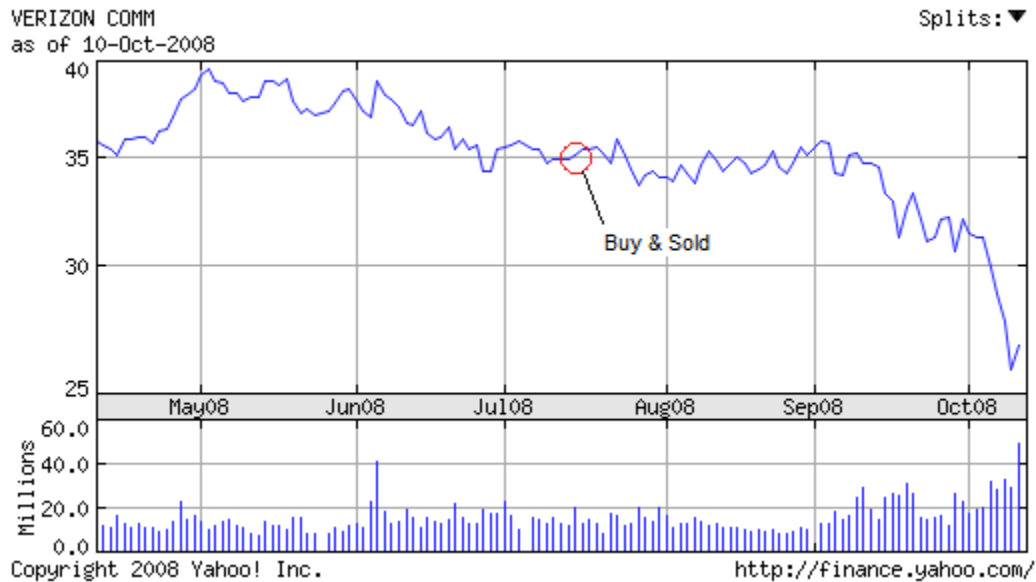


Fig 16. Verizon in the past 6 months

I have bought 500 shares of Verizon at the price \$34.7 and sold it at \$36.1, resulting in a profit of \$680. This trade was pretty successful, regarding to the time I used and the money I used. So far, day trading at normal price is more successful than the expensive ones.

Yahoo Inc.

Symbol	Number of Shares	Money Used	Buy in Price	Sell out Price	Gain / Loss
YHOO	1000	20010	20	20.15	+130

Table 26. Results for Yahoo



Fig 17. Yahoo in the past 6 months

Looking at Table 26 and Fig 17, we can see that I have bought 1000 shares of Yahoo at the price \$20 and have sold it at \$20.15. A profit of \$130 was made. The reason I can make a profit of \$130 even with only a \$0.15 cents rise, is because I have bought 1000 shares. And the reason I could afford 1000 shares is because the stock price is lower. This shows that the lower the stock price is, the higher the profit is, because more shares can be afford.

Bank of America Corp.

Symbol	Number of Shares	Money Used	Buy in Price	Sell out Price	Gain / Loss
BAC	1000	32710	32.7	33.7	+980

Table 27. Results for Bank of America



Fig 18. Bank of America in the past 6 months

I have bought 1000 shares of Bank of America at the price \$32.7 and have sold it at \$33.7, resulting in a profit of \$980. This is one of the successful trades. But again, because the stock is fairly expensive, only 1000 shares could be afforded, and the profit is relatively low comparing to the money I used.

5.3.3. Day Trading – Cheap

Date	Symbol	Action	Number of shares	Buy in price	Sell out price	Cost	Profit / Loss
7/9/2008	NOVL	Buy	7000	5.8		40610	
7/9/2008	NOVL	Sell	7000		5.77		-230
7/14/2008	AMD	Buy	7000	4.84		33810	
7/14/2008	AMD	Sell	7000		4.94		680
7/15/2008	CPSL	Buy	9000	4.1		36910	
7/15/2008	CPSL	Sell	9000		4.05		-470
7/16/2008	ROYL	Buy	4000	8.3		33210	
7/16/2008	ROYL	Sell	4000		7.97		-1340
7/17/2008	WM	Buy	7000	4.56		31930	
7/17/2008	WM	Sell	7000		5.5		6560
7/21/2008	SOV	Buy	5000	8.37		41860	
7/21/2008	SOV	Sell	5000		8.1		-1370
7/24/2008	DDRX	Buy	25000	1.65		41260	
7/24/2008	DDRX	Sell	25000		1.75		2480
8/1/2008	GRZ	Buy	20000	1.42		28410	
8/1/2008	GRZ	Sell	20000		1.45		580

Table 28. Results for Day Trading (Cheap)

Novell Inc.

Symbol	Number of Shares	Money Used	Buy in Price	Sell out Price	Gain / Loss
NOVL	7000	40610	5.8	5.77	-230

Table 29. Results for Novell

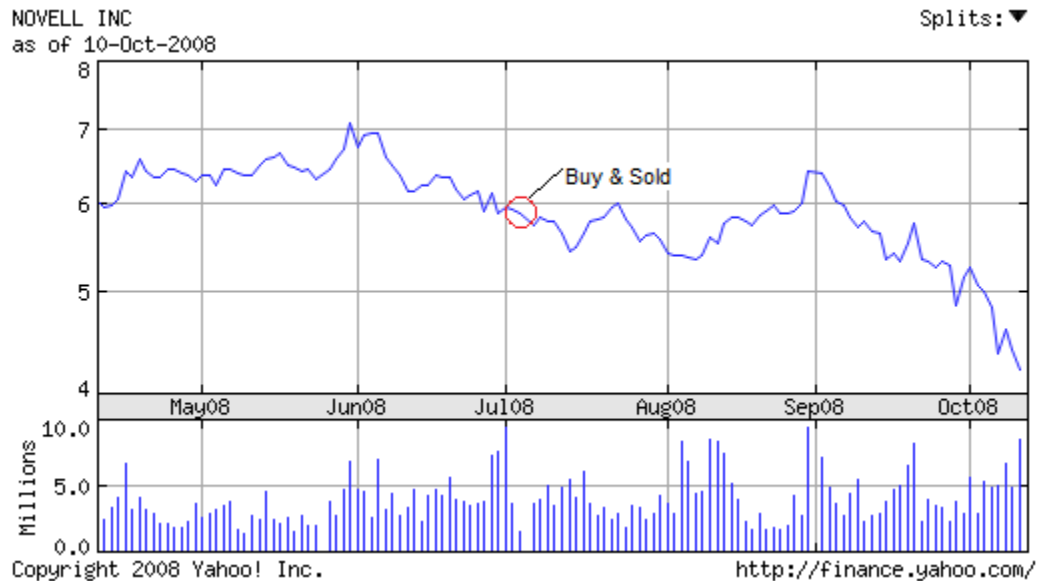


Fig 19. Novell in the past 6 months

I have bought 7000 shares of Novell at the price \$5.8 and have sold it at \$5.77, resulting in a loss of \$230. Although I have lost \$230, but that is a small amount regarding to the money I have used and the amount of shares I have. Looking at the trend, it shows that the fluctuation of this stock is not too big in the past 6 months. This might shows low price stocks are not suitable for day trading strategy.

Advanced Micro Devices Inc.

Symbol	Number of Shares	Money Used	Buy in Price	Sell out Price	Gain / Loss
AMD	7000	33810	4.84	4.94	+680

Table 30. Results for AMD



Fig 19. AMD in the past 6 months

I have bought 7000 shares of AMD at the price \$4.84 and have sold it at \$4.94, after a rise of \$0.10 cents. This is one of the ideal day trading, since the stock price is so low, I could afford 7000 shares. Due to that, even a slight rise of \$0.1 cents brought me \$680 profit.

China Precision Steel Inc.

Symbol	Number of Shares	Money Used	Buy in Price	Sell out Price	Gain / Loss
CPSL	9000	36910	4.1	4.05	-470

Table 31. Results for China Precision Steel



Fig 19. AMD in the past 6 months

I have bought 9000 shares of China Precision Steel at the price \$4.1 and have sold it at \$4.05. I have lost \$470 in this day's trading. Although I have lost \$470 for this trading, but I find such amount is bearable, regarding to the money I have used and amount of shares I have. Even a slight rise would have brought me an adequate amount of profit.

Royal Energy

Symbol	Number of Shares	Money Used	Buy in Price	Sell out Price	Gain / Loss
ROYL	4000	33210	8.3	7.97	-1340

Table 32. Results for Royal Energy



Fig 20. Royal Energy in the past 6 months

I have bought 4000 shares of Royal Energy at the price \$8.3 and have sold it at \$7.97. I have lost \$1340 in this day's trading. Again, although I have lost \$1340 for this trading, but I still find such amount is bearable, regarding to the money I have used and amount of shares I have. Even a slight rise would have brought me an adequate amount of profit.

Washington Mutual Inc.

Symbol	Number of Shares	Money Used	Buy in Price	Sell out Price	Gain / Loss
WM	7000	31930	4.56	5.5	+6560

Table 33. Results for Washington Mutual



Fig 21. Washington Mutual in the past 6 months

Looking from Table 33 and Fig 21, we can see that I have bought 7000 shares of Washington Mutual at the price \$4.56 and have sold it at \$5.5, resulting in a profit of \$6560. This is by far the most successful day trading in this simulation. From looking at the trend, it was right at the period I invest was rising, rest of the time was generally a downward trend. This is the ideal day trading: a very low price stock with more than a dollar difference in one day.

Sovereign Bank

Symbol	Number of Shares	Money Used	Buy in Price	Sell out Price	Gain / Loss
SOV	5000	41860	8.37	8.1	-1370

Table 34. Results for Sovereign Bank



Fig 22. Sovereign Bank in the past 6 months

I have bought 5000 shares of Sovereign Bank at the price \$8.37 and have sold it at \$8.1. I have lost \$1370 for this trade. This is one of the more expensive “cheap” stocks, although I could afford 5000 shares, but it was still very expensive for the 5000 shares. Where in this case, I think I can lower the limit for “cheap” stocks to below \$5 dollars would be the best, which is basically “penny stocks”.

Diedrich Coffee Inc.

Symbol	Number of Shares	Money Used	Buy in Price	Sell out Price	Gain / Loss
DDRX	25000	41260	1.65	1.75	+2480

Table 35. Results for Diedrich Coffee



Fig 23. Diedrich Coffee in the past 6 months

I have bought 25000 shares of Diedrich Coffee at the price 1.65, and have sold it at \$1.75. I have earned a profit of \$2480 just with the slight rise of \$0.10 cents. This is another ideal trading for day trading strategy. Since the stock price is so low, I was able to afford 25000 shares, which is the most shares I have bought in this simulation.

Gold Reserve Inc.

Symbol	Number of Shares	Money Used	Buy in Price	Sell out Price	Gain / Loss
GRZ	20000	28410	1.42	1.45	+580

Table 36. Results for Gold Reserve



Fig 24. Gold Reserve in the past 6 months

I have bought 20000 shares of Gold Reserve at the price \$1.42 and have sold it at \$1.45. With the slight rise of \$0.03 cents, I have made a profit of \$580. Another ideal trading for day trading method: an adequate profit just from a slight rise.

To wrap up, looking at the results of each trade from day trading. From the three categories: “expensive”, “normal”, and “cheap”, the “cheap” stocks have been the most successful one. The “normal” stocks were not too bad also. But the “expensive” ones are definitely not suitable for day trading.

6. Discussion and Evaluation

6.1 Advantage and Disadvantage of each strategy

After finishing the simulation, based on my experience and the results, I have come up with the following pros and cons of each strategy.

Penny Stock

The advantage of Penny Stock is that the risk is very low a very high profit can be obtained. First of all, the money requires is fairly low. Secondly, even with a small amount of money, a large amount of shares can be consumed. If the company stock is in good shape, and because so many shares have been bought, one can make a huge profit. Even if the stock price drops, it is still bearable, since stock prices for these stocks tend to drop with a smaller difference, therefore there is always enough time to take action to sell all the shares with a small loss. But in return, the disadvantage of Penny Stock is that if the development of the company is in very bad shape, there is always a chance that the stock price for that company to go close down to \$0. Not like a developed company with higher stock price, even if their stock price drops down a lot, it tends to stop dropping at a certain limit.

Long term trading

Although from my simulation, Long term trading was the most unsuccessful one, but in terms of advantage, I can say it is another low-risk strategy. Since the money spent was not expect to return for a long term of period anyways, then that means those money is excess money. Then there is not much to worry

about it. If the stock price drops drastically during the period, but because long term trading tends to require more developed and expensive stocks, the stock price should drop to a certain limit and bounce back. If the stock price rises drastically, then the investor is care free, they can have the choice of keeping it or selling it at anytime. Also, another advantage for Long Term trading is that the profit can be very high if one chose the right stock to invest in. The only disadvantage for long term trading is that because it tends to require more stable and developed companies, the stock price is very expensive. Which requires a large sum of money to invest in.

Day Trading

One of the advantages I find for Day Trading is that there is a certain limit of money can be lost, in which the limit is not high. Since day trading requires the investor to be always up to date with the stock market, the investor can choose to sell their shares at any moment. They may choose to afford a small loss, which may lead to a much bigger loss if the stock was not sold out by that day. Another advantage is that the money circulates very quick, so the next action can be taken right away. One disadvantage of Day Trading is that the profit may be relatively small each time, since it is difficult to time when to sell the stocks.

6.2 The 'Best' Strategy

According to the results of my simulation, at the end with the \$100000 capital I started with, I made a profit of \$10203. The 'best' strategy I find is day trading,

especially with “cheap” stocks. According to my results, the most successful trade I had was a profit of \$6560 with the day trading strategy for a “cheap” stock. Although the profit of day trading is relatively small each time, but according to my results, just from all the Day Trading trades, a total of \$13339 profit was made. A profit of \$3190 was made by Penny Stock trading, and a loss of \$6326 from Long Term trading.

7. Conclusion

This project discussed three investment strategies for stocks- penny stock trading, day trading and long term investment and went on to use each strategy in a simulation of stock purchasing and investing. Although the results for the simulation did not show anything out of what was already known, it was an interesting way to compare the difference in results of different investment strategies.

Just as the introduction to each of the strategies mention, each investment method has its own advantages and disadvantages. Investment in stocks is much like gambling and there is no one way that is right or wrong. Investments are personal decisions and must be made according to research or at least knowledge of how stock markets work and the stock one wishes to invest in. Having experience would also probably provide useful insight into how market trends usually go or how particular stocks usually behave. Much like gambling, there is no 100% guarantee in investing money in listed companies although some companies are more stable and perhaps investors are more guaranteed to have gains by investing in that company.

Just as an understanding of the company, its financial stability, and room for financial growth as well as potential for growth are some of the important factors for investing in that particular company, the method one chooses to invest in the company is also of great importance.

This project has then, looked at the results of three investment strategies and several findings have been observed. Generally, it was found that day trading resulted in the greatest gains with \$13339 while long term investment resulted in the greatest losses \$6326. Penny stock trading managed to earn \$3190 just below the stocks bought for day trading.

These results may reflect the fact that this is merely a simulation. In real life, one may choose to invest for months to years for long term investments while for this project, stocks for the long term investment strategy were only invested in for five weeks. At the same time, those who traded stocks using penny-stock trading might have sold their stocks again merely a few minutes after they had bought it and would not have held on to it for as long as two weeks. Because this was a project and all varying factors must be kept the same in order for it to be fair and reliable, the period that the stocks were held likely had an effect on the results observed and do not necessarily demonstrate results that would occur in real life. Although this is the case, it is likely that this simulation has given some idea of how different strategies work out.

Depending on the person's personal investment style, amount of money available for investment, the trends and patterns of that particular stocks and knowledge and experience in this field, different strategies will yield different results. One can only use these generalized observations to invest money in stocks.

To summarize, this project has allowed me to gain a deeper understanding of stock market strategies as well as the background to stock markets as a whole as well as specifically. This experience allowed me to research information on different companies and what makes it interesting is that some of these companies are those that I myself come into contact with everyday i.e. the products of these companies. It has also been quite useful for me to really get an understanding of how to perhaps do investment for myself in real life. Although I feel that theoretical rules and theories should not be followed too strictly, I feel that I have gained a lot of information and these strategies, risks and consequences are worth keeping in mind when I might come to invest in stocks.

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